

# PATENT SPECIFICATION

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(19)



## (54) JEWELRY

(71) We, DAVID BARRY LINFORD BRICKWOOD of 2 Veronica Road, London, S. W. 17., and IAN MELVYN KNIGHT of 158 Bedford Hill, London, S.W.17., both of British Nationality, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention relates to jewellery, which term is intended to include articles of personal adornment, not necessarily formed of precious materials.

According to the invention there is provided an article of jewellery comprising a container, an electrical light signalling device within the container, an electrical power supply for the device, an electrical oscillator circuit connected between the power supply and the device and means for attaching the container to the body or the clothing of the wearer.

Preferably, the electrical power supply is in the form of an electrical battery also contained within the container. Two devices may be provided, connected to the output of the oscillator so that the devices are energised alternately. The container may be attached to the person or clothing of the wearer by means of a necklace, or by means of a brooch pin, for example.

An example of the invention will now be described with reference to the accompanying drawings in which Figure 1 is a front elevation of a necklace pendant, Figure 1A is side elevation of the pendant of Figure 1 and Figure 2 is a circuit diagram of the pendant of Figure 1.

The pendant of Figure 1 is formed by moulding an electrical oscillator circuit with two lamps 11 in transparent thermosetting potting material to form a cuboidal shape container 12, a figure 8-shaped aperture 13 being moulded at the lower end for support-

ing a pair of hearing-aid batteries 14 for energising an oscillator circuit 15 located between the lamps 11 and batteries 14. A hole 16 is moulded transversely at the top of the block, through which a polished finish circular wire 17 of about 4 inches radius is passed. The ends of the wire 17 are formed as hooks 18 for hooking together, so that the wire 17 can be passed around the neck of the wearer and the ends hooked together behind the neck in order to mount the block securely on the wearer in front of the neck.

Figure 2 shows the circuit diagram of the oscillator 15, which is of conventional form and will not be described in detail. The circuit is symmetrical, and energises the light emitting diodes 11 in the collector circuits of its transistors alternately. Light emitting diodes are used in this embodiment, since their power consumption is small, and this enables small batteries to be used with a life expectancy of many hours. More than two lamps can be provided, divided into two sets; the sets being energised alternately.

Clearly, other forms of active device could be used to those shown in the circuit diagram, including field effect transistors and uni-junction transistors, silicon controlled rectifiers, integrated circuits. The polarity of the supply and the light emitting diodes should be varied when the transistors are changed from PNP to NPN.

The components of the circuit 15 are mounted on a small printed circuit, and are arranged in symmetrical fashion as indicated in Figure 1, thus providing an attractive design which can be viewed through the transparent potting material. In Figure 1, the pair of light emitting diodes 11 are shown at the top of the container 12, with four resistors 21 arranged in a row across the container, and a pair of capacitors 22 mounted one above the other down the centre of the container. The two

transistors 23 are mounted side by side near the lower end of the container, immediately above the aperture 13 for the batteries.

A switch (not shown) may be incorporated in the battery circuit, so that the oscillator 15 can be switched off when not required in order to extend the life of the batteries. Light emitting diodes are used as light signalling devices in the present embodiment, because they use very little current, and in certain applications it may be possible to mould the batteries within the potting material without provision for replacing the batteries or switching them off if the batteries can energise the lamps for a sufficiently long period.

The container for the lamps and the energising circuit can be made in any desired shape, and can be supported from the wearer's clothing for example by means of a brooch clip or pin, or formed on a bracelet.

Any type of electrical lamp can be used, although the choice will be restricted by the capacity of the power supply. Liquid crystals, including material such as tin, niobium, copper, barium and aluminium, have been suggested for use as light signalling devices by reflecting external light or an internal lamp.

Light emitting diodes may be made of any of the following materials: lead, selenium, Tellurium, Indium, sulphur, arsenic, gallium, phosphorus, boron, zinc, carbon, silicon, copper and cadmium.

#### WHAT WE CLAIM IS:—

1. An article of jewellery comprising a container, an electrical light signalling device within the container an electrical power supply for the device an electrical oscillator circuit connected between the power supply and the device and means for attaching the container to the body or the clothing of the wearer.

2. An article as claimed in Claim 1 wherein the power supply is contained in the container.

3. An article as claimed in Claim 1 or Claim 2 wherein at least some of the components within the container are permanently fixed therein by a thermosetting material.

4. An article as claimed in Claim 3 wherein said material is transparent.

5. An article as claimed in any one of Claims 1 to 4 comprising a plurality of electrical light signalling devices.

6. An article as claimed in Claim 5 wherein the devices are divided into sets, the sets being energisable alternately by the oscillator circuit.

7. An article as claimed in any one of Claims 1 to 6 wherein the attaching means comprises a necklace.

8. An article as claimed in any one of Claims 1 to 6 wherein the attaching means comprises a brooch pin.

9. An article as claimed in any one of Claims 1 to 6 wherein the attaching means comprises a bracelet.

10. An article as claimed in any one of Claims 1 to 9 wherein the or each device is an electrical lamp.

11. An article as claimed in claim 10 wherein the or each lamp is a light emitting diode.

12. An article as claimed in any one of Claims 1 to 9 wherein the or each device is a liquid crystal.

13. An article of jewellery substantially as herein described with reference to and as illustrated in the accompanying drawings.

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COMPLETE SPECIFICATION

1 SHEET

This drawing is a reproduction of  
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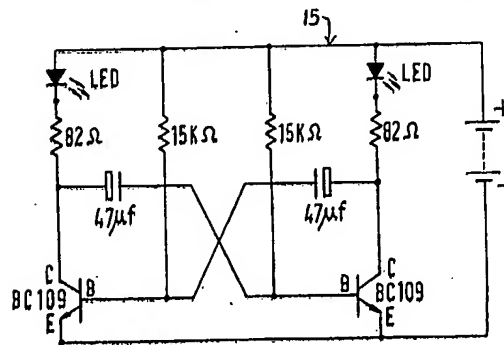
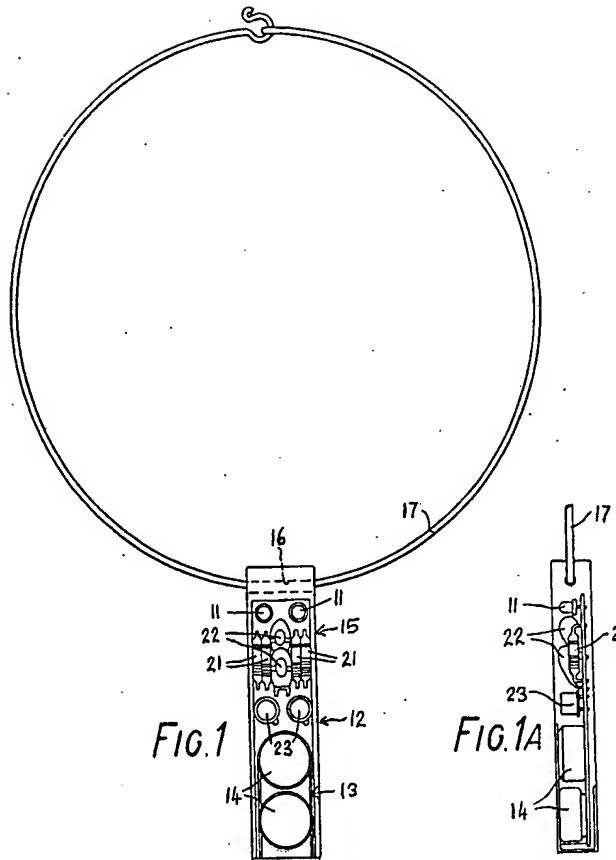


FIG. 2